Remarks/Arguments:

Claims 1-11 and 13-19 are pending.

Claim 12 is cancelled, without prejudice or disclaimer.

Claim 1 is amended, herewith, by incorporating the subject matter of original claim 12 (also described at page 10, first complete paragraph, of the instant specification); i.e., claim 1 (currently amended) corresponds to original claim 12. Present claim 13 is amended in order to be dependent on claim "1" instead of claim 12 (cancelled hereby).

In connection with the requirement for election of species (election having been made November 21, 2007), according to the instant Office Action (page 2) "Claims 12 and 14-15 are withdrawn from further consideration as being drawn to the non-elected invention." With all due respect, withdrawal of claims 12, 14 and 15 is improper and incorrect, since the withdrawn claims are not drawn to the non-elected invention.

Requirement for election was made, *i.a.*, to a species of the "phenyl compounds" recited in original claim 12 as an alternative (in a Markush group) for the "deodorant agent" recited in claim 1.

Applicants elected phenyl-compound species "phenyl esthers," recited in original claim 13. Each of original claims 12, 14, and 15 reads on the elected species (as set forth in Applicants' election, claims 1-19 read on the elected species).

Claim 12 is generic with respect to the elected species, as explained above (i.e., "phenyl compounds," in claim 12, is generic to "phenyl esthers," in claim 13). Accordingly, original claim

12 reads on the elected species, and, therefore, in concert with the requirement for election of species, original claim 12 should have been examined. MPEP 821 ("The examiner should clearly set forth in the Office Action the reasons why the claims withdrawn from consideration are not readable on the elected invention").

Each of original claims 14 and 15 reads on the elected species. Original claim 14 (which is dependent on claim 13) limits only the phenyl-alcohol subject matter of claim 13, i.e., claim 14 recites "wherein the phenyl alcohols are selected." In other words, claim 14 does not exclude the "phenyl esters" (recited in claim 13) and, so, the scope of claim 13 overlaps that of claim 14. Accordingly, claims 13 and 14 are not mutually exclusive with respect to the elected "phenyl ester" subject matter and, so, claim 14 should have been examined, along with claim 13. MPEP 806.04(f) (To be "mutually exclusive . . . claims must not overlap in scope").

Original claim 15 limits only the scope of "the phenyl acids" recited in claim 13. Claim 15, therefore, does not exclude "phenyl esthers" from being the "phenyl compound" recited in claim 13. Accordingly, the scope of claims 13 and 15 overlap, and, therefore, are not "mutually exclusive," making withdrawal of claim 15 improper. MPEP 806.04(f).

For the foregoing reasons, withdrawal of claims 12, 14, and 15 from consideration pursuant to the requirement for election of species was improper. Examination of the subject matter of original claims 12 (i.e., currently amended claim 1), 14 and 15, together with the already examined claims, appears to be in order.

Claims 1, 2, 4-9 and 17-19 were rejected under 35 USC §103(a), as being allegedly unpatentable over U.S. Patent No. 4,683,258 (Itoh). Reconsideration is requested, in view of the changes to the claims effected, hereby, in conjunction with the following remarks.

The PTO alleges that Itoh teaches manufacturing a composition, optionally incorporating an odor preventive, in a two-step method comprising (1) reacting together a homopolymer or copolymer of at least one N-alkyl or N-alkylene substituted acrylamide or (meth)acrylamide, a crosslinkable monomer such as N,N'-methylenebisacrylamide, and (2) an initiator and incorporating the composition into a fibrous material. According to the statement of rejection, Itoh does not exemplify the method of the rejected claims (i.e., manufacturing a deodorant using the recited ingredients); nevertheless, of the present it allegedly would have been obvious, under §103(a), to use the recited components to form "polymer particles" and load "a deodorant agent" to the formed polymer particles, as recited in the rejected claims. The rejection is traversed.

More specifically, the PTO alleges that Itoh suggests polymerization of the instant monomers, crosslinking agents with the use of an initiator, and adding odor preventives for integration into fibrous material and, therefore, argues it would have been obvious to one of ordinary skill in the art to use the recited compounds because they are all useful in making an absorbing and releasing agent for integration into fibrous material. The PTO alleges that, although Itoh does not teach loading the deodorant agent to the polymer particles, it would be obvious to one of ordinary skill in the art to do so because fibrous material will be able to absorb moisture as well as prevent odor from occurring in the fibrous material; and, furthermore, although Itoh does not teach how the

polymeric particles are attached to the fibrous substrate, one of ordinary skill in the art would readily assume that, since the recited components and the components taught by the prior art are (allegedly) the same, in the absence of evidence to the contrary, the polymeric particles would be inherently attached to the substrate by hydrogen bonding.

The present claims, per independent claim 1 as currently amended, specifically limit the method of the present invention to the deodorant agent "selected from the group consisting of C18:1 dioic acid, C18:2 dioic acid, and phenyl compounds."

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art," *In re Wilson*, 165 USPQ 494, 496 (CCPA 1970), "and it is error to ignore specific limitations distinguishing over the [prior art] reference." *Ex parte Murphy*, 217 USPQ 479, 481 (PO Bd. App. 1982). A "ground of rejection is simply inadequate on its face . . . [when] the cited references do not support each limitation of [the] claim." *In re Thrift*, 63 USPQ2d 2002, 2008 (Fed. Cir. 2002).

First of all, the rejection cannot be maintained against the rejected claims as presently amended. As explained above, present claim 1 and, therefore, claims 2, 4-9, and 17-19 (by virtue of being dependent on present claim 1), are now limited to the "deodorant agent" being "selected from the group consisting of C18:1 dioic acid, C18:2 dioic acid, and phenyl compounds." Itoh neither teaches nor suggests the limitation on the present claims to a C18:1 dioic acid deodorant

agent, a C18:2 dioic acid deodorant agent, or a phenyl-compound deodorant agent and, as such, a limitation on the present claims is not supported by the cited reference.

Since Itoh does "not support each limitation of [the present] claim[s]," as explained in the immediately preceding paragraph, maintaining the rejection against any of the rejected claims (as currently amended) would be "inadequate on its face." *Thrift*, 63 USPQ2d at 2008. The teachings of Itoh fail to establish a *prima facie* case of obviousness against any of the present claims, since all limitations on the present claims are neither taught nor suggested by the cited reference. *Royka, supra*. Withdrawal of the rejection under §103(a) of claims 1, 2, 7-9, and 17-19 based on Itoh appears to be in order.

Secondly, the rejection under §103(a) based on Itoh (alone) cannot be maintained for lack of the requisite motivation to modify Itoh as alleged in the statement of rejection. In the context of a rejection for obviousness under §103, the "Examiner bears [both] the initial burden . . . of presenting a *prima facie* case of unpatentability" and "the ultimate burden of persuasion on the issue." *In re Oetiker*, 24 USPQ 1443, 1444 and 1447 (Fed. Cir. 1992). "The Examiner can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art *would lead* that individual to combine the relevant references. . . . Indeed, the teachings of the references can be combined only if there is some suggestion or incentive to do so." *Ex parte Obukowicz*, 27 USPQ2d 1063, 1065 (BPA&I 1992) (*emphasis, added*).

> A suggestion, teaching, or motivation to combine the relevant prior art teachings does not have to be found explicitly in the prior art . . . . However, rejections on

> obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.

In re Kahn, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006).

Itoh teaches a process of manufacturing a composition having:

a) a water insolubilized product prepared from:

(i) a homopolymer of a monomer selected from the group consisting of N-alkyl and N-alkylene-substituted (meth)acrylamides;

(ii) a first copolymer of at least two monomers selected from the group consisting of N-alkyl and N-alkylene-substituted (meth)acrylamides;

(iii) a second copolymer of ast least one monomer selected from the group consisting of the N-alkyl and N-alkylene-substituted (meth)acrylamides and at least one monomer other than the N-alkyl and N-alkylene-substituted (meth)acrylamides which is copolymerizable with the N-alkyl and N-alkylene-substituted (meth)acrylamides; and

b) a hygroscopic material selected from the group consisting of metal halides and metal perchlorates.

Applicants note that optional additives to the Itoh composition include a variety of surfactants, perfumes, rust preventives, colorants, odor preventives, antiseptics, abrasives, builders, and the like. Furthermore, polymerization initiators may be used to initiate radical polymerization. Still further, crosslinkable monomers may be added to the composition. Moreover, the polymer may be integrated with a fibrous material.

The composition obtained from the process of Itoh is useful for absorbing or releasing water vapor; and, the composition has a hygroscopic capacity that varies, significantly, in degree depending on the temperature and, moreover, when heated it can easily release a relatively large amount of water, i.e., water that the same composition had absorbed (previously) at a relatively lower temperature.

In other words, upon contact with, for example, water vapor, the Itoh composition absorbs and holds water therein. The composition can repeatedly absorb and release water, depending on the humidity and temperature of the surrounding atmosphere. Since more water and moisture can generally be absorbed at lower temperatures than at higher temperatures, it is feasible to have the composition serve as dehumidifiers or demoisturizers at low temperatures and as humidifiers or moisturizers at higher temperatures. Itoh teaches that, because his compositions have the aforesaid functions, changes in relative humidity or moisture level due to temperature variations are reduced by their use, so as to maintain a consistent relative humidity or constant moisture level.

It is also important to note that, according to Itoh (column 10, lines 13 to 19), the water vapor or moisture releasing rate may be set at the same level as, or faster than, the water vapor or moisture absorbing rate. This property (is not, according to Itoh, observed with conventional water vapor or moisture absorbents.

Since Itoh allegedly suggests polymerization of the instant polymers, crosslinking agents, with the use of an initiator, and additives such as odor preventives for integration into fibrous material, the PTO argues that it would have been obvious to one of ordinary skill in the art to use the

instant components, because they are useful in making an absorbing and releasing agent for integration into fibrous material.

As recognized by the PTO, Itoh does not disclose a deodorant agent as in the rejected claims. However, since the reference discloses the use of an odor preventive (in the composition) as well as the manner in which polymeric particles can be attached to fibrous material, the PTO alleges that one of ordinary skill in the art would have been led to the invention of the rejected claims because with the incorporation of the odor preventive in the composition, the fibrous material will be able to absorb moisture, as well as prevent odor from occurring, in the fibrous material. With all due respect, Applicants disagree with the PTO's allegations.

The composition as taught by Itoh is for absorbing and releasing water upon changes in relative humidity of the surroundings, so as to be effective in maintaining a constant humidity or moisture level. In fact, Itoh teaches that the water vapor absorbing and releasing agent of the invention may, therefore, be used as a humidity-controlling agent for the humidification, dehumidification, and humidity maintenance of gases and for the prevention of moisture condensation on walls and the like, as antifogging agents for glasses and the like, and as humidity and dew sensors, etc.

It is important to emphasize that the Itoh composition includes a hygroscopic metal halide or metal perchlorate. Thus, by combining such hygroscopic material with the water-insolubilized polymeric product, the Itoh composition is specifically useful to absorbing and releasing water.

In contrast to Itoh, the present invention as claimed is directed to a method of manufacturing a deodorant, which deodorant (1) releases deodorant agents at certain temperatures and (2) has improved adherence to textiles. In particular, in accordance with the presently claimed invention, deodorants are loaded into polymer particles (i.e., microgels) during synthesis of the microgels, or they are absorbed into the microgels bound to the fibrous materials due to hydrophobic interactions between the deodorant and the stationery phase. Thus, upon contact with warm body fluid or human skin, the microgels shrink and, with the change of hydrophobicity, the deodorants are released in a controlled manner.

In view of the absence of the deodorant agent in the composition of Itoh, that the Itoh composition is directed to an entirely different use from the presently claimed invention, the PTO has failed to provide the requisite motivation to modify Itoh as alleged in the statement of rejection. *Kahn*, 78 USPQ2d at 1336. Withdrawal of the rejection under §103(a) over Itoh appears, further, to be in order.

Claims 3, 10, and 11 were rejected under 35 USC §103(a), as being allegedly unpatentable over Itoh in view of U.S. Patent No. 5,284,900 (Izubayashi). Reconsideration is requested, in view of the changes to the claims effected, hereby, taken together with the following remarks.

Firstly, the rejection cannot be maintained against present claims 3, 10, and 11 for the same reasons set forth above, with respect to the §103(a) rejection based on Itoh, alone. As explained above, present claim 1 is now limited to the "deodorant agent" being "selected from the group consisting of C18:1 dioic acid, C18:2 dioic acid, and phenyl compounds." As also explained above,

Itoh fails to teach or suggest the aforesaid limitation on present claim 1 and, so, the rejection under §103(a) based on Itoh (alone) cannot be maintained against present claim 1.

Present claims 3, 10, and 11—by virtue of being dependent on present claim 1—are also limited to a C18:1 dioic acid deodorant agent, a C18:2 dioic acid deodorant agent, or a phenyl-compound deodorant agent. Izubayashi fails to cure this fatal deficiency of Itoh, since Izubayashi also fails to teach or suggest the limitation on present claims 3, 10, and 11 to the C18:1 dioic acid deodorant agent, a C18:2 dioic acid deodorant agent, or a phenyl-compound deodorant agent.

With respect to each of present claims 3, 10, and 11, since "the cited references [Itoh and Izubayashi] do not support each limitation of [each] claim," as explained in the immediately preceding paragraph, maintaining the rejection against any of claims 3, 10, and 11 (as currently amended) would be "inadequate on its face." *Thrift*, 63 USPQ2d at 2008. The teachings of Itoh and Izubayashi fail to establish a *prima facie* case of obviousness against any of present claims 3, 10, and 11, since all limitations on the present claims are neither taught nor suggested by the cited references. *Royka, supra*. Withdrawal of the rejection under §103(a) of claims 3, 10, and 11 appears to be in order.

Secondly, the rejection under §103(a) based on Itoh and Izubayashi cannot be maintained against present claims 3, 10, and 11 because the rejection fails to take into consideration all teachings of the cited references. "One cannot use hindsight reconstruction to pick and choose among isolated

disclosures in the prior art to deprecate the claimed invention." *In re Fine*, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988).

> It is impermissible within the framework of §103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art.

In re Hedges, 228 USPQ 685, 687 (Fed. Cir. 1986). Teachings of the prior art must be taken as a whole in an obviousness analysis. *Ryko Manufacturing Co. v. Nu-Star, Inc.*, 21 USPQ2d 1053 (Fed. Cir. 1991).

The PTO admits that Itoh does not fully meet rejected claim 3, because the reference neither teaches nor suggests use of the "main monomer"—(N-substituted alkyl)acrylamide—in an amount of 80 to 90%. The PTO admits that Itoh does not fully meet rejected claims 10 and 11, because the reference neither teaches nor suggests use of the recited "binding agent"—whereby "the polymer particles are attached to the fibrous substrate." Allegedly, these deficiencies are cured by the teachings of Izubayashi.

The PTO alleges that Izubayashi teaches making a polymer composition—identical to neither Itoh's polymer composition nor the "polymer particles" (i.e., microgels) recited in rejected claim 3—that happens to use the "main monomer" in the "amount of 80% to 90%," as recited in rejected claim 3. Accordingly, the PTO alleges that it would have been obvious to modify Itoh to use 80-90% (N-substituted alkyl)acrylamide because, in view of Izubayashi, it was known to make a polymer using 80-90% (N-substituted alkyl)acrylamide. The allegations by the PTO—with respect to rejected claim 3—are incorrect.

The PTO alleges that Izubayashi teaches making a polymer composition—identical to neither Itoh's polymer composition nor the "polymer particles" (i.e., microgels) recited in rejected claims 10 and 11—that happens to use the "binding agent," by which "the polymer particles are attached to the fibrous substrate," as recited in rejected claims 10 and 11. The allegations by the PTO—with respect to rejected claims 10 and 11—are incorrect.

Izubayashi teaches an aqueous resin dispersion, i.e., a resin produced by emulsion polymerization crosslinks, together, with the emulsifier used in the polymerization to form a coating film. In particular, a compound having a carboxyl group and a long chain alkylthio group or a salt thereof is used as an emulsifier and emulsion polymerization is carried out using—as starting materials—a polymerizable monomer or monomers having a group reactive with a carboxyl group.

According to Izubayashi, the aqueous resin dispersions provided, therein, exhibit excellent adhesiveness to various substrates, water resistance, moisture resistance, and durability; moreover, they are free from the risk of fire or environmental pollution, less subject to foaming, and easier to handle, i.e., compared with aqueous resin dispersions (or the like) produced by using known low-molecular-weight emulsifiers.

Izubayashi teaches that the aqueous resin dispersions are useful as textile finishing compositions. Since they are excellent in adhesiveness to natural or synthetic, organic or inorganic fibers, they can be used as binders for non-woven fabrics and paper made of such fibers and as surface treating compositions, adhesives and other compositions to be applied to cloths, paper and other textile products made of such fibers.

Accordingly, Izubayashi may teach using the "binding agent" recited in rejected claims 10 and 11. However, the PTO mistakenly relies on this teaching of Izubayashi, because it improperly uses "hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." *Fine*, 5 USPQ2d at 1600. With all due respect, the PTO impermissibly picks and chooses from Izubayashi

> only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art.

Hedges, 228 USPQ at 687. The teachings of Izubayashi must be taken as a whole in the instant obviousness analysis. *Ryko Manufacturing Co., supra.*

The polymer composition of Itoh is different from the polymer composition of Izubayashi. The fact that two references describe a polymer structure having a monomer residue—of (N-substituted alkyl)acrylamide—in common does not suggest that it would have been obvious to modify Itoh to use the same binding agent used by Izubayashi in order to attach the (Itoh) polymer to a fabric. *See In re Levitt*, 11 USPQ2d 1315 (Fed. Cir. 1989).

The fact that all elements of a claimed invention are known does not, by itself, make the combination obvious. *Ex parte Clapp*, 227 USPQ 972 (BPA&I 1985). It is legally erroneous to reach a conclusion of obviousness under §103 solely on the basis that the claimed invention represent a "combination which only unites old elements." *Pentec, Inc. v. Graphic Controls Corp.*, 227 USPQ 766, 771 (Fed. Cir. 1985).

Since the rejection of claims 10 and 11 under §103(a) relies solely on the old, known use—in view of Izubayashi—of a binding agent to attach a polymer to a fabric, the rejection cannot be maintained against rejected, or present, claims 10 and 11. *Clapp, supra.*

For the foregoing reasons, the rejection under §103(a) cannot be maintained against any of the rejected, or present, claims 3, 10, and 11. Accordingly, withdrawal of the rejection appears to be in order.

Applicants submit that there is simply no motivation or suggestion from the teachings of Itoh Izubayash that would have led a person skilled in the art to a method of preparing a deodorant—capable of loading onto a fibrous material so as to provide a controlled release of deodorant agent upon contact with warm body fluid or human skin—in accordance with the present claims.

Claims 13 and 16 were rejected under 35 USC §103(a), as being allegedly unpatentable over Itoh in view U.S. Patent No. 6,322,665 (Sun). Reconsideration is requested, in view of changes to the claims effected, hereby, taken in conjunction with the following remarks.

Firstly, the rejection cannot be maintained against present claims 13 and 16 for the same reasons set forth above, with respect to the §103(a) rejection based on Itoh, alone. As explained above, present claim 1 is now limited to the "deodorant agent" being "selected from the group consisting of C18:1 dioic acid, C18:2 dioic acid, and phenyl compounds." As also explained above, Itoh fails to teach or suggest the aforesaid limitation on present claim 1 and, so, the rejection under §103(a) based on Itoh (alone) cannot be maintained against present claim 1.

Present claims 13 and 16—by virtue of being dependent on present claim 1—are also limited to a C18:1 dioic acid deodorant agent, a C18:2 dioic acid deodorant agent, or a phenyl-compound deodorant agent. Sun fails to cure this fatal deficiency of Itoh, since Sun also fails to teach or suggest the limitation on present claims 13 and 16 to the C18:1 dioic acid deodorant agent, a C18:2 dioic acid deodorant agent, or a phenyl-compound deodorant agent.

With respect to each of present claims 13 and 16, since "the cited references [Itoh and Sun] do not support each limitation of [each] claim," as explained in the immediately preceding paragraph, maintaining the rejection against either of claims 13 and 16 (as currently amended) would be "inadequate on its face." *Thrift*, 63 USPQ2d at 2008. The teachings of Itoh and Sun fail to establish a *prima facie* case of obviousness against either of present claims 13 and 16, since all limitations on the present claims are neither taught nor suggested by the cited references. *Royka, supra*. Withdrawal of the rejection under §103(a) of claims 13 and 16 appears to be in order.

Secondly, the rejection cannot be maintained because PTO mistakenly alleges that, although Itoh does not teach the specific use of cyclodextrin, this deficiency is cured by the teachings of Sun.

In particular, the PTO alleges that, because Itoh suggests that odor preventing agents can be added to the composition for absorbing and releasing water vapor, it would have been obvious to one of ordinary skill in the art to use a cyclodextrin, as Sun shows that it was known to be used as an odor controlling substance in polymeric compositions for application onto a fibrous material.

Sun teaches a method for making high wet performance webs. The method as taught by Sun includes applying a polymeric anionic reactive compound (PARC) solution onto a web, followed by

curing. Sun has found that with this method, the webs produced have a high wet strength as compared to webs made according to other methods. Particularly, the methods impart high wet resiliency, high wet strength, and a high wet/dry strength ratio to wet-formed webs.

It is noted from the Sun reference that other chemical treatments of the web can also be considered, desirably after curing the PARC, including the inclusion of superabsorbent particles, incorporation of odor-control substances such as cyclodextrins, baking soda, or chelating agents, the topical application of waxes and emollients, and the application of hydrophobic material over portions of the web.

As discussed above, it is clear that Itoh does not teach the present invention as claimed in the amended claims, as the Itoh reference is specifically directed to a composition for absorbing and releasing water upon changes in relative humidity of the surroundings so as to be effective in maintaining a constant humidity or moisture level.

Itoh does not teach, disclose or otherwise suggest a deodorant agent for releasing deodorant agents at certain temperatures nor a method of preparing such a deodorant agent. In fact, Itoh teaches the combination of a hygroscopic material with a water insolubilized product which is prepared from polymers so as to prepare a composition which is specifically useful to absorbing and releasing water.

Although Sun teaches that cyclodextrins can be used as an odor-control substance, there is no motivation or suggestion from the teachings of Itoh that a person skilled in the art upon reading this reference would be lead to a method of preparing a deodorant which may be loaded onto a

fibrous material so as t provide a controlled release of deodorant agent upon control with warm body fluid or human skin. Accordingly, there would be no motivation or suggestion to a person skilled in the art to combine the teachings of Itoh with that of Sun to be led to the invention of present claims 13 and 16.

For the foregoing reasons, Itoh and Sun—taken alone or in combination—do not teach the present invention as claimed in claims 13 and 16. There is no motivation to combine the Itoh reference with the Sun reference in order to suggest the presently claimed invention. Accordingly, withdrawal of the rejection of claims 13 and 16 appears, further, to be in order.

Favorable action is requested.

Respectfully submitted,

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